



SECOR
INTERNATIONAL
INCORPORATED

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February 3, 2006

Mr. Dale Radford, PE
County of Sonoma Department of Health Services, Environmental Health Division
3273 Airway Drive, Suite D
Santa Rosa, CA 95403

Re: Extraction Well Installation Report
Circle K Store No. 5426
8510 Gravenstein Highway
Cotati, California
SECOR Project No.: 77CP.65426.08.0012

Mr. Dale Radford:

This letter, prepared by SECOR International Incorporated (SECOR) on behalf of ConocoPhillips, presents the results of extraction well installation activities at the site referenced above (Figure 1). This work was performed with the approval of the Sonoma County Department of Environmental Health Division (SCDEHD), as stated in correspondence dated August 18, 2005 (Attachment 1). A description of the site background, previous investigations and remedial action, completed scope of work, findings, conclusions, and a description of the extraction program are presented below.

SITE BACKGROUND

The site is an active Circle K Store and Service Station located on the southeast corner of the intersection of Gravenstein Highway and Redwood Drive in Cotati, California. Six wells (MW-2, MW-6 through MW-9, and OW) are currently monitored on a quarterly basis at the site. In addition, joint groundwater monitoring has been performed, including monitoring ten additional wells at the adjacent ARCO facility.

PREVIOUS INVESTIGATIONS AND REMEDIAL ACTION

On October 11, 1993, Randall and Sons Construction (R&S) removed five steel underground storage tanks (USTs) from the site. Total petroleum hydrocarbons as gasoline (TPHg) and diesel (TPHd), as well as benzene, toluene, ethylbenzene, and xylenes (BTEX) were detected in confirmation soil samples collected from the side-walls of the UST excavation. R&S subsequently over-excavated approximately 400 cubic yards (cy) of hydrocarbon-impacted soil. Confirmatory soil samples collected from the side-walls of the over-excavation area indicated residual hydrocarbon impact remained in the northwestern portion of the excavation.

On October 12, 1994, R&S performed additional over-excavation of approximately 200 cy of soil from the northwestern portion of the initial excavation. TPHd was detected at 65 parts per million (ppm) in a confirmation soil sample collected from the newly exposed side-wall in the northwestern portion of the over-excavation. No other petroleum hydrocarbons were detected in soil samples collected during this phase of the excavation.

A total of five groundwater monitoring wells (MW-2 and MW-6 through MW-9) and one UST cavity observation well (OW), were installed subsequent to over-excavation activities. Groundwater monitoring has been on going since January 1996. Historical groundwater analytical results indicate the presence of TPHg, TPHd, BTEX, and methyl tertiary butyl ether (MtBE) in groundwater beneath the site, particularly in the northwestern (downgradient) portion of the site.

In December 1999, SECOR submitted a Remedial Alternative Feasibility Study (FS) to the Sonoma County Department of Health Services (SCDHS). After a review of five remedial alternatives, the FS recommended chemical oxidation as a technically feasible, cost-effective remedial technology for the site.

In October 2000, SECOR submitted the results of a well survey conducted within a 1,900-foot radius of the site as requested by the SCDHS. Thirteen wells (of which a total of eleven are used for domestic and/or irrigation water supply purposes) were located within the 1,900-foot search radius around the Site. The site was found to fulfill the State Water Resources Control Board (SWRCB) guidelines for a Priority Class A Site due to the presence of MtBE in excess of 10,000 parts per billion (ppb) in groundwater, and a water supply well within 1,900 feet of the site.

During July 2001 SECOR supervised drilling of eight continuous-core soil borings (GP-1 through GP-6, GP-8, and GP-9). Five borings were advanced to approximately 21 feet below ground surface (bgs), and three borings were advanced to 46 feet bgs. Select soil samples, one grab groundwater sample per shallow boring, and two grab groundwater samples per deeper boring were analyzed for TPHg, BTEX, and fuel oxygenates. Soil samples contained up to 1,300 milligrams per kilogram (mg/kg) TPHg, 1.6 mg/kg benzene, 5.3 mg/kg ethylbenzene, and 57 mg/kg xylenes. MtBE was not detected in soil samples. Grab groundwater samples contained benzene to 0.087 milligrams per liter (mg/L), xylenes to 0.086 mg/L, and MtBE to 14 mg/L. No other analytes were detected.

During May 2002, SECOR supervised the installation of one soil boring, which was subsequently converted to monitoring well MW-10. The MW-10 boring was advanced to 30 feet bgs, and subsurface soil samples were collected every five feet. Select soil samples were analyzed for TPHg, BTEX, and fuel oxygenates. The maximum reported concentrations in soil samples were 3.1 mg/kg TPHg, 0.0081 mg/kg ethylbenzene, 0.0091 mg/kg xylenes, and 0.033 mg/kg MtBE (via Method 8020M). A post-development groundwater sample collected from MW-10 contained 230 µg/L ethylbenzene, 180 µg/L xylenes, and 5,000 µg/L MtBE. After MW-10 was installed, a pump test was conducted using MW-10 as the pumping well and MW-2, MW-7, MW-8, MW-9, and OW as observation wells. Estimated aquifer parameters for pumping well MW-10 were as follows:

- Transmissivity: 74.4 ft²/day
- Conductivity: 3.9 ft/day
- Zone of influence: 161.7 feet

During May 2002, SECOR conducted a dual phase extraction (DPE) pilot test using well MW-10. DPE was performed using a 20-horsepower liquid ring vacuum pump connected

to a H2 Oil Recovery Systems, Inc. thermal oxidizer unit. The pilot test time was approximately 33 hours. During the DPE test approximately 24 pounds of TPHg and 0.07 pounds of MtBE were extracted. The estimated radius of influence for DPE at well MW-10 was 26 feet.

SCOPE OF WORK

From November 14, 2005 to December 8, 2005 SECOR installed four on-site extraction wells (EW-1, EW-2, EW-3, and EW-4) at locations shown on Figure 2. Drilling activities were performed by Cascade Drilling, Inc. of Rancho Cordova, California. The Completed Scope of work is discussed below:

- **Health and Safety Plan.** As required by the Occupational Health and Safety Administration (OSHA) Standard "Hazardous Waste Operations and Emergency Response" guidelines (29 CFR 1910.120), and by California Occupational Health and Safety Administration (Cal-OSHA) "Hazardous Waste Operations and Emergency Response" guidelines (CCR Title 8, Section 5192), SECOR prepared a site-specific Health and Safety Plan (HASP). Field staff and contractors reviewed the HASP before beginning field operations at the site.
- **Extraction Well Installation.** The borings for on-site extraction wells were drilled to a depth of approximately 20 feet bgs for EW-3, 22 feet bgs for EW-2 and EW-4, and 20.5 feet bgs for EW-1. Each boring was converted to an extraction well. Each well was constructed with 4-inch diameter schedule 40 PVC casing with 15 feet of 0.020-inch factory slotted casing from approximately 7 feet bgs to 22 feet bgs. Soil boring and well construction details are included in Table 1. All work was conducted in accordance with stipulations within well construction permits obtained from the SCDEHD (Attachment 2). Field and laboratory procedures are presented in Attachment 4. Boring logs and well construction details are included in Attachment 5.
- **Soil Sampling.** Soil samples from EW-1 were collected at 5-foot intervals. Samples from 10 feet, 15 feet and 20 feet were sent under chain-of-custody procedures to Severn Trent Laboratories (STL) of Pleasanton, California, a California state-certified laboratory, for chemical analysis. The samples were analyzed for the presence of gasoline range organics (GRO), BTEX, and fuel oxygenates MtBE, ethyl tert-butyl ether (EtBE), tert-amyl methyl ether (TAME), tert-butyl ether (TBA), di-isopropyl ether (DIPE), ethylene dibromide (EDB), 1,2-dichloroethane (1,2-DCA) and ethanol by EPA Method 8260B. Results of these analyses are presented in Table 2.
- **Water Sampling.** Following the development of the extraction wells, water samples were collected from wells EW-1 through EW-4. The water samples were submitted to Severn Trent Laboratories (STL) of Pleasanton, California for chemical analysis. The samples were analyzed for the presence GRO, BTEX, MtBE, EtBE, TAME, TBA, DIPE, EDB, 1,2-DCA, and ethanol by EPA Method 8260B. Results are included in Table 3. The certified laboratory analytical reports and chain-of-custody

documentation are presented in Attachment 6. Well development logs are presented in Attachment 7.

FINDINGS

Subsurface Conditions

On-site soils encountered consisted of silty sands from approximately ground surface to 10 feet bgs and lean clays from approximately 10 feet bgs to 22 feet bgs with interbedded sand and gravel at approximately 20 feet bgs. Stabilized shallow groundwater was measured in existing on-site monitoring wells at approximately 11 feet below top of casing.

Soil Analytical Results

Soil samples collected during field activities were delivered under chain-of-custody to STL. Select soil samples collected from EW-1 were submitted and analyzed for the presence of TPHg, BTEX, and fuel oxygenates MtBE, TAME, DIPE, EtBE, TBA, ethanol, 1,2-DCA and EDB by EPA Method 8260B. All soil samples collected contained the requested analytes below laboratory reporting limits with the exception of samples EW-1@10' (MtBE at 0.021 mg/Kg), EW-1@15' (ethylbenzene at 15,000 mg/Kg, total xylenes at 18,000 mg/Kg, and GRO at 970,000 mg/Kg), and EW-1@20' (ethylbenzene at 0.033 mg/Kg and total xylenes at 0.034 mg/Kg).

Groundwater Analytical Results

Groundwater samples collected during field activities were delivered under chain-of-custody to STL. Groundwater samples collected from extraction wells EW-2 through EW-4 were submitted and analyzed for the presence of GRO, BTEX, MtBE, 1,2-DCA, TAME, TBA, DIPE, EDB, EtBE, and ethanol by EPA Method 8260B. Benzene was detected in samples from wells EW-2, EW-3, and EW-4 at concentrations of 280 µg/L, 3800 µg/L, and 0.84µg/L, respectively. Ethylbenzene was detected in samples from wells EW-2 and EW-3 at concentrations of 12 µg/L and 1700 µg/L, respectively. MtBE was detected in samples from wells EW-2, EW-3, and EW-4 at concentrations of 180 µg/L, 290 µg/L, and 30 µg/L, respectively. TAME was detected in samples from wells EW-2 and EW-4 at concentrations of 3.8 µg/L and 0.59 µg/L, respectively. Toluene was detected in samples from wells EW-2 and EW-3 at concentrations of 3.6 µg/L and 76 µg/L, respectively. Total xylenes were detected in samples from wells EW-2 and EW-3 at concentrations of 47 µg/L and 1800 µg/L, respectively. TBA was detected in samples from wells EW-2 and EW-4 at concentrations of 440 µg/L and 9.3 µg/L, respectively. GRO was detected in samples from wells EW-2, EW-3, and EW-4 at concentrations of 3000 µg/L, 15000 µg/L, and 190 µg/L, respectively. All other analytes were below laboratory reporting limits.

Groundwater Flow Direction and Gradient

During the third quarter 2005, depth to groundwater ranged from 9.5 to 11.5 feet bgs. Historically groundwater depths have been reported between 5.50 feet and 12.96 feet bgs. Based on data collected during the third quarter of 2005, the direction of groundwater flow is toward the northeast at a gradient of 0.01 foot per foot.

Soil Cuttings and Purge Water

Soil cuttings (17 drums) and waste water (7 drums) were generated during drilling activities from November 14, 2005 to December 8, 2005. These drums were temporarily stored on-site in State of California, Department of Transportation (DOT)-approved, 55-gallon, steel

drums. Filter Recycling Services, Inc. (FRS), a California-certified disposal contractor, removed the drummed soil cuttings and rinsate water on January 5, 2005 and transported it to their facility for treatment/disposal. The Waste Manifest Forms are included in Attachment 3.

CONCLUSION

Groundwater samples collected from extraction wells EW-2, EW-3 and EW-4 were analyzed for the presence of GRO, BTEX, MtBE, 1,2-DCA, TAME, TBA, DIPE, EDB, EtBE, and ethanol by EPA Method 8260B. GRO, BTEX, MtBE, TAME, and TBA were detected above laboratory reporting limits in groundwater. Soil samples collected from extraction well EW-1 were analyzed for the presence of GRO, BTEX, MtBE, 1,2-DCA, TAME, TBA, DIPE, EDB, EtBE, and ethanol by EPA Method 8260B. MtBE, ethylbenzene, total xylenes and GRO were detected above laboratory reporting limits in soil. Currently a dual phase extraction system is in design to address the hydrocarbon impacted soil and groundwater. SECOR anticipates the system to be installed during the first quarter 2006 and operational during the second quarter 2006.

LIMITATIONS

This report has been prepared for the exclusive use of ConocoPhillips and its representatives as it pertains to the property located at 8510 Gravenstein Highway, Cotati, California. The evaluation of subsurface conditions at the site for the purpose of this investigation is inherently limited due to the number of points of investigation. There are no representations, warranties, or guarantees that the results are representative of the entire site. Data from this report reflects the conditions at locations at a specified time. No other interpretation, representations, warranties, guarantees, express or implied, are included or intended in the report findings.

If there are any questions, please call us at (916) 861-0400.

Sincerely,
SECOR International, Incorporated

Devon Hovis
Devon Hovis
Staff Geologist

Thomas M. Potter
Thomas M. Potter
Project Scientist

D. Schreiner
Dan Schreiner, P.G.
Associate Geologist



Attachments:

Table 1 – Soil Boring and Well Construction Details

Table 2 – Soil Analytical Data

Table 3 – Groundwater Elevation and analytical Results

Figure 1 – Site Location Map

Figure 2 – Site Plan

Attachment 1 – SCDEHD Approval Letter Dated August 18, 2005

Attachment 2 – SCDEHD Permits

Attachment 3 – Hazardous Waste Manifest Documentation

Attachment 4 – Field and Laboratory Procedures

Attachment 5 – Boring Logs with Well Construction Details

Attachment 6 – Certified Laboratory Analytical Reports and Chain-of-Custody Documentation

Attachment 7 – Well Development Logs

Attachment 8 – Confirmation of EDF Submittal

cc: Mr. Thomas Kosel, ConocoPhillips

TABLES

Table 1
Soil Boring and Well Construction Details

Circle K Store #5426
8510 Gravenstein Highway 101
Cotati, California

Well I.D.	Drill Date	Date Installed	Well		Screened Interval		Filter Pack		Filter Pack		Ben- tonite	
			Depth (bgs)	Diameter (inches)	Top (bgs)	Bottom (bgs)	Top (bgs)	Bottom (bgs)	Top (bgs)	Bottom (bgs)	Top (bgs)	Bottom (bgs)
EW-1	12/8/2005	12/08/05	20.5	4	5.5	20.5	4.5	20.5	2.5	4.5		
EW-2	11/14/2005	11/14/05	22.0	4	7.0	22.0	6.5	22	4.5	6.5		
EW-3	11/15/2005	11/15/05	20.0	4	5.0	20.0	4.5	20	2.5	4.5		
EW-4	11/14/2005	11/14/05	22.0	4	7.0	22.0	6.5	22	4.5	6.5		
Explanations:												
bgs = Below ground surface.												

Table 2
Soil Analytical Data

Circle K Store #5426
8510 Gravenstein Highway 101
Cotati, California

				EPA Method 8260B												
Sample Name	Flag if applicable	Sample Depth (ft bgs)	Date Sampled	GRO (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	MIBE (mg/kg)	DIPE (mg/kg)	TAME (mg/kg)	EIBE (mg/kg)	TBA (mg/kg)	Ethanol (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)
EW-1@10'	B, *	10	12/8/2005	<0.99	<0.0049	<0.0049	<0.0049	<0.0099	0.021	<0.0049	<0.0049	<0.0049	<0.0099	<0.49	<0.0049	<0.0049
EW-1@15'	B, *	15	12/8/2005	970000	<910	<910	15000	18000	<910	<910	<910	<910	<1800	<91000	<910	<910
EW-1@20'	B, *	20	12/8/2005	<0.88	<0.0044	<0.0044	0.033	0.034	<0.0044	<0.0044	<0.0044	<0.0044	<0.0088	<0.44	<0.0044	<0.0044
Notes:				MIBE = Methyl tertiary butyl ether TAME = Tert-amyl methyl ether TBA = Tertiary butyl alcohol 1,2-DCA = 1,2-Dichloroethane < = Not detected above * = LCS, LCSD, MS, MSD, MD, or Surrogate exceeds the control limits B = Compound was found in the blank and sample.												
DIPE = Di-isopropyl ether EDB = Ethylene dibromide or 1,2-Dibromoethane EIBE = Ethyl tertiary butyl ether ft bgs = feet below ground surface GRO = gasoline range organics mg/kg = milligrams per kilogram																

Table 3
Groundwater Elevation and Analytical Results

Circle K Store #5426
8510 Gravenstein Highway 101
Cotati, California

Sample ID	Date Sampled	Depth to Water (bgs)	Ground-water Elevation (feet)	Analyzed By EPA Method 8260B											
				GRO (ug/l)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	MIBE (ug/l)	TAME (ug/l)	DIPE (ug/l)	EIBE (ug/l)	TBA (ug/l)	1,2-DCA (ug/l)	EDB (ug/l)
EW-2	11/21/2005	13.5*	10.9**	3000	280	3.6	12	47	180	3.8	ND	ND	440	ND	ND
EW-3	11/21/2005	14.5*	11.1**	15000	3800	76	1700	1800	290	ND	ND	ND	ND	ND	ND
EW-4	11/21/2005	14*	11.4**	190	0.84	ND	ND	ND	30	0.59	ND	ND	9.3	ND	ND

Explanation:

bgs = below ground surface

DIPE = Di-Isopropyl Ether

EPA = Environmental Protection Agency

EIBE = Ethyl tertiary Butyl Ether

GRO = gasoline range organics

* = first water

** = static water

MIBE = Methyl tertiary Butyl Ether

TAME = Tertiary Amyl Methyl Ether

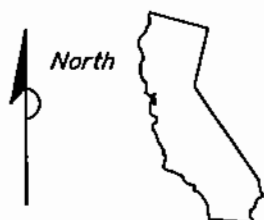
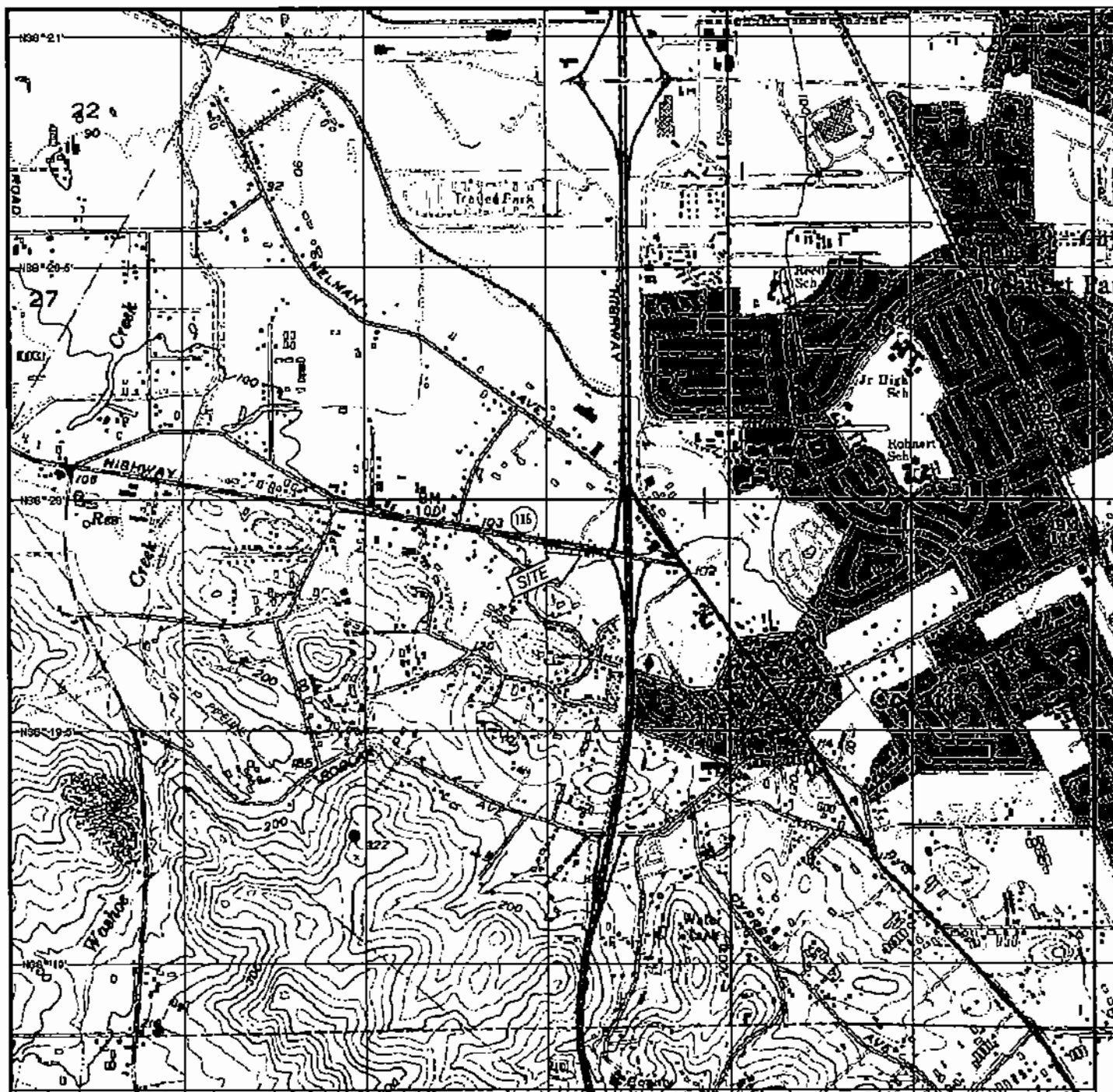
TBA = Tertiary Butyl Alcohol

ug/l = micrograms per liter

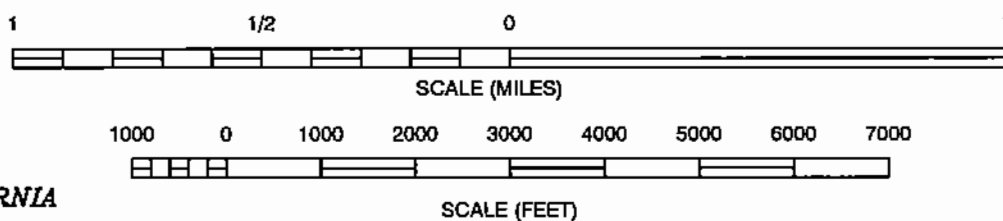
1,2-DCA = 1,2-Dichloroethane

EDB = Ethyl Dibromide or 1,2-Dibromoethane (1,2-DBA)

FIGURES



CALIFORNIA



REFERENCE: USGS 7.5 MINUTE QUADRANGLE, DELORME, CALIFORNIA



SECOR

3017 KILGORE ROAD, SUITE 100
RANCHO CORDOVA, CALIFORNIA
PHONE: (916) 861-0400/861-0430 (FAX)

FOR:

CONCOPHILLIPS
CIRCLE K STORE NO. 5426

8501 GRAVENSTEIN HIGHWAY
COTATI, CALIFORNIA

JOB NUMBER:
77CP.65426.01

DRAWN BY:
MDR

CHECKED BY:
JSA

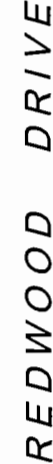
APPROVED BY:
JSA

FIGURE:

1

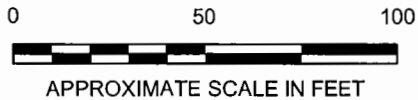
DATE:
7/12/05

GRAVENSTEIN HIGHWAY



LEGEND:

- | | |
|--------|--|
| ☆OW | OBSERVATION WELL
(CONOCOPHILLIPS) |
| ⊕MW-2 | GROUNDWATER MONITORING
WELL (CONOCOPHILLIPS) |
| ⊕MW-5 | GROUNDWATER MONITORING
WELL (ARCO) |
| ⊕MW-10 | GROUNDWATER MONITORING
WELL LOWER ZONE (ARCO) |
| ⊙GP-1 | BORING LOCATION |
| ∅ | ABANDONED WELL |
| ⊕EW-1 | EXTRACTION WELL LOCATION |



3017 KILGORE ROAD, SUITE 100
RANCHO CORDOVA, CALIFORNIA
PHONE: (916) 861-0400/861-0430 (FAX)

FOR:

CONOCOPHILLIPS NO. 5426
8510 GRAVENSTEIN HWY.
COTATI, CALIFORNIA

JOB NUMBER:
77CP.65426.08

DRAWN BY:
DWR

CHECKED BY: DH

APPROVED BY: TF

FIGURE:

SITE PLAN

2

DATE: 1/12/06

ATTACHMENT 1
SCDEHD APPROVAL LETTER DATED AUGUST 18, 2005
Extraction Well Installation
Circle K Store #5426
8510 Gravenstein Highway 101
Cotati, California



COUNTY of SONOMA
DEPARTMENT OF HEALTH SERVICES

Rita Scardaci, MPH – Director
Sharon Aguilera – Assistant Director

Environmental Health Division

Walter L. Kruse – Director

August 18, 2005

Mr. David DeWitt
ConocoPhillips
76 Broadway
Sacramento, CA 95818

Re: Review of Remedial Action Plan
8510 Gravenstein Highway, Cotati
Leaking Underground Storage Tank Site
SCDHS-EHD Site #00001670; NCRWQCB Site #1TSO551

Dear Mr. DeWitt:

On July 15, 2005, this Department received the referenced Corrective Action Plan (CAP) dated July 13, 2005 from SECOR International, Inc. Thank you very much for this submittal. We have reviewed the CAP and generally concur with the work recommended. Please note the following comments and conditions:

1. An approved Application for Drilling Permit is required from this Department prior to the implementation of the work. An acceptable Site Safety Plan must be submitted for review prior to permit approval. If a Site Safety Plan has been submitted for similar work within the past 24 months, a reference to that plan is acceptable. The reference should include any addendums or changes that pertain to the current proposed work not covered in the previous work plan.
2. You are responsible for obtaining any necessary approvals or permits from all agencies having jurisdiction over any aspect of the proposed work. These agencies may include, but not be limited to, Fire Services, Building Department, Planning Department, Public Works, Caltrans, Regional Water Quality Control Board, California Fish and Game Department, Cal OSHA, etc.
3. This Department requires notification at least 48 hours prior to performing any work at this site.

November 21, 2005 has been established as the due date for submittal of a report documenting the installation of the proposed extraction wells. A report summarizing system installation and startup should be submitted to this Department by February 20, 2006.

RECEIVED
AUG 22 2005

Mr. David DeWitt
August 18, 2005
Page 2

This Department appreciates the effort you are making to remediate this site. Please contact me at (707) 565-6573 or by e-mail at dradford@sonoma-county.org if you have any questions or wish to discuss this further.

Sincerely,

A handwritten signature in black ink that reads "Dale Radford". The signature is fluid and cursive, with the first name "Dale" and last name "Radford" clearly distinguishable.

Dale Radford, P.E.
Civil Engineer
Leaking Underground Storage Tank
Local Oversight Program

DR

c: Mr. Luis Rivera, North Coast Regional Water Quality Control Board
Mr. David Charter, SWRCB Cleanup Fund
Mr. Thomas Potter, SECOR International
Mr. Nadar Shaterian, P. O. Box 69, Cotati, CA 94931-0069
Mr. Robert Bardel, Estate of Dorothy Ramsey, 1922 Filbert Street,
San Francisco, CA 94123

ATTACHMENT 2
SCDEHD PERMITS

Extraction Well Installation
Circle K Store #5426
8510 Gravenstein Highway 101
Cotati, California

COUNTY OF SONOMA — DEPARTMENT OF HEALTH SERVICES
ENVIRONMENTAL HEALTH DIVISION
475 Aviation Blvd., Suite 220, Santa Rosa, CA 95403
Phone (707) 565-6565 Fax (707) 565-6525 www.sonoma-county.org

APPLICATION FOR DRILLING PERMIT
for Regional Board Lead/Environmental Assessment / LOP Lead

For Office Use Only	
Amount paid	\$323.79
Receipt number	306B
Payment date	10-31-05
Rev. code	1343
Site ID#	1670
Permit #	4843MMW

Well type: ☐ Monitoring well ☒ Recovery extraction well ☐ Boring ☐ Injection well ☐ Destruct ☐ Environmental assessment
☐ Soil gas survey ☐ Direct push ☐ Air sparging/venting ☐ Remediation well ☐ Other

Well depth 20 feet Boring depth 20 feet

On-site well/boring 4 ID # EW-1, EW-2, EW-3, EW-4 # Off-site well/boring 0 ID # N/A

Submit legal right-of-entry/off-site well address/encroachment permit

On-site Address 8510 GRAVENSTEIN HWY, COTATI, CA AP# 144-130-028-000

Facility Name CIRCLE K STORE #2705426

On-site Owner CONOCO PHILLIPS Phone (916) 558-7666

Street 76 BROADWAY City SACRAMENTO State CA Zip 95818

Responsible Party CONOCO PHILLIPS Phone

Street 76 BROADWAY City SACRAMENTO State CA Zip 95818

Consultant SECOR INTERNATIONAL, Inc. Phone (916) 861-0400

Street 3017 KILGORE RD, SUITE 100 City RANCHO CORDOVA State CA Zip 95670

License #/Type 654498 CORP

Drilling Contractor CASCADE DRILLING, Inc. Phone

Street 3632 OMEC CIRCLE City RANCHO CORDOVA State CA Zip 95742

C-57 License # 657-717510

Type of work: ☐ Initial investigation ☐ # Wells ☒ Subsequent investigation 4 # Wells ☐ Destruct ☐ # Wells

Groundwater investigation due to: ☐ Underground tank ☐ Surface impoundment ☒ Environmental assessment
☐ Surface disposal practice—specify involved industry
☐ Other

Perforated intervals 5 to 20 BGS Chemical constituents

Disposal method for soil cuttings 55 D.O.T. GALLON DRUMS Disposal method for development water 55 D.O.T. GALLON DRUMS

Drilling method HOLLOW STEM AUGER Method of drill equip. rinsate containment 55 D.O.T. GALLON DRUMS

If destroying a well, abandonment method

Submit plot plan of wells in relation to all sewer or septic lines.

Is well to be constructed within: 100 feet of a septic tank or leachfield? ☐ Yes ☒ No
50 feet of any sanitary sewer line? ☐ Yes ☒ No
25 feet of any private sanitary sewer line? ☐ Yes ☒ No

001343D
WELL PER 323.7
TTLANT 323.7
CHECKS 323.7
CHANGE 0.0
306B #2 14:05

10/31/05

In addition, all monitoring wells must include *identification system* affixed to interior surface:

1) Well identification 2) Well type 3) Well depth 4) Well casing diameter 5) Perforated intervals

Well identification number and well type shall be *affixed* to the *exterior surface* security structure.

For Office Use Only	
Address	8510 Gravenstein Hwy
Site ID#	11070
Permit #	4843 HMW

I hereby agree to comply with all laws and regulations of the County of Sonoma and State of California pertaining to water well construction. I will telephone (707) 565-6565, 48 hours in advance, to notify the Environmental Health Specialist when completing or destroying a well. I will furnish the Director of Health Services and the owner a legible copy of the State Water Well Driller's Report within 15 days; and a copy of the Summary Report, including sample results, should be received by this Department within 90 days in order to obtain final approval on this well permit. I acknowledge that the application will become a permit *only* after site approval and payment of fee. I understand that this permit is not transferable and expires one year from date of issuance

[Signature]

Date 10/18/05

Signature of Well Driller—no proxies

Insurance Carrier Alaska National Insurance Expiration Date 5-1-06

Once all wells/borings are installed, submit a Well Driller's Log and/or Summary Report to complete permit process.

Indicate on attached plot plan the exact location of well(s) with respect to the following items: property lines, water bodies or water courses drainage pattern, roads, existing wells, sewer main and laterals and private sewage disposal systems or other sources of contamination or pollution. INCLUDE DIMENSIONS. The validity of this permit depends upon the accuracy of the information provided by the applicant.

Conditions of permit:

♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦

FOR OFFICE USE ONLY – ENVIRONMENTAL HEALTH DIVISION

Permit approved by Dale Radford *[Signature]* Date 11/2/05

Constr. approved by _____ Observed? ☐ Yes ☐ No Well # _____ Date 1/1/

RWQCE / LOP approval Dale Radford *[Signature]* Date 11/2/05

ATTACHMENT 3
HAZARDOUS WASTE MANIFEST DOCUMENTATION
Extraction Well Installation
Circle K Store #5426
8510 Gravenstein Highway 101
Cotati, California

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest
Document No.
07312

2. Page 1
of 1

1/3/2006

3. Generator's Name and Mailing Address
CONOCO PHILLIPS ATTN: RITA COTTON
600 N DAIKY ASHFORD, TR1010A
HOUSTON, TX 77079
4. Generator's Phone: (281) 293-6647

5. Transporter 1 Company Name
FILTER RECYCLING SVS, INC. -NO

6. US EPA ID Number
CAR000129304

A. Transporter's Phone
(510) 670-9901

7. Transporter 2 Company Name
FILTER RECYCLING SERVICES, INC.

8. US EPA ID Number
CAD982444481

B. Transporter's Phone
(909) 873-4141

9. Designated Facility Name and Site Address
FILTER RECYCLING SERVICES, INC
100 N MONTE AVE
RIALTO, CA 92316

10. US EPA ID Number
CAD982444481

C. Facility's Phone
(909) 421-2012

11. Waste Shipping Name and Description

12. Containers
No. Type

13. Total
Quantity

14. Unit
Wt/Vol

NON HAZARDOUS WASTE LIQUID

0.080 M 0.0400 G.

NON HAZARDOUS WASTE SOLID

0.140 M 0.1200 P

15. Additional Descriptions for Materials Listed Above

(1A) WATER
(1B) SOIL

BILL TO SECOR

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Wear appropriate protective clothing P/U: CIRCLE K 5426
8510 GRAVENSREIN HWY (116)
24 Hour Emergency Response # (909) 721-2038 COTATI, CA 94931

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

Signature

Month Day Year

Printed/Typed Name

Signature

Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Signature

Month Day Year

ORIGINAL - RETURN TO GENERATOR

ATTACHMENT 4
FIELD AND LABORATORY PROCEDURES

Extraction Well Installation
Circle K Store #5426
8510 Gravenstein Highway 101
Cotati, California

ATTACHMENT 4

FIELD AND LABORATORY PROCEDURES

Exploratory Drilling

The soil borings for wells EW-1, EW-2, EW-3, and EW-4 were drilled using 10-inch hollow-stem auger drilling equipment. Each boring was logged by a SECOR geologist, under the supervision of a SECOR California Professional Geologist, using the Unified Soil Classification System and standard geologic techniques. Soil samples for logging were collected at 5-foot depth intervals using a California-modified split-spoon sampler. The sampler was driven a maximum of 18 inches using a 140-pound hammer with a 30-inch drop. All down-hole drilling and sampling equipment was steam-cleaned prior to and following the completion of the soil borings. Down-hole sampling equipment was washed in a trisodium phosphate oralconox solution between samples.

Organic Vapor Procedures

Soil samples collected at 5-foot depth intervals during drilling were analyzed in the field for ionizable organic compounds using a flame-ionization detector (FID) or a PID with a 10.2 eV lamp. The test procedure involved measuring approximately 30 grams from an undisturbed soil sample, placing this subsample in a Ziplock™-type bag or in a clean glass jar, and sealing the jar with aluminum foil secured under a ring-type threaded lid. The container was warmed for approximately 20 minutes (in the sun), then the head-space within the container was tested for total organic vapor, measured in parts per million as benzene (ppm; volume/volume). The instrument was calibrated prior to drilling. The results of the field-testing were noted on the boring logs (Attachment 5). FID/PID readings are useful for indicating relative levels of contamination, but cannot be used to evaluate petroleum hydrocarbon levels with the confidence of laboratory analyses.

Extraction Well Installation

Each extraction well was completed within the soil boring by installing a 4-inch diameter, flush-threaded, Schedule 40 PVC casing with 15 feet of 0.02" slotted screen. An RMC 2/16 sand pack, or equivalent, was placed in the annular space across the entire screened interval, extending approximately 0.5 feet above the top of the screen. A 2-foot bentonite transition seal was placed atop the sand pack at the capillary fringe, followed by a cement seal, extending from the top of the bentonite transition seal (approximately 4 feet below ground surface) to the ground surface. The boring logs show well construction details (Attachment 5).

Laboratory Procedures

Groundwater samples were collected by SECOR following well development, and were analyzed for the presence of gasoline range organics (GRO), benzene, toluene, ethyl benzene, and total xylenes (collectively known as BTEX), methyl tert-butyl ether (MtBE), ethyl tert-butyl ether (EtBE), tert-amyl methyl ether (TAME), tert-butyl ether (TBA), di-isopropyl ether (DIPE), ethylene dibromide (EDB), 1,2-dichloroethane (1,2-DCA), and ethanol by EPA Method 8260B.

Soil Cuttings and Purge Water

17 drums of soil and 7 drums of water were generated during drilling and development activities from November 14, 2005 to December 8, 2005. The drums were temporarily stored on-site. Filter Recycling, a California-certified disposal contractor, removed the drums on January 5, 2006 and transported to the ConocoPhillips refinery in Rodeo, California for proper disposal for proper disposal.

ATTACHMENT 5
BORING LOGS AND WELL CONSTRUCTION DETAILS

Extraction Well Installation
Circle K Store #5426
8510 Gravenstein Highway 101
Cotati, California

PROJECT: Circle K Store #5426
 LOCATION: 8510 Gravenstein Hwy 101, Cotati, California
 PROJECT NUMBER: 77CP.65426.08.0012

WELL / PROBEHOLE / BOREHOLE NO:

EW-1 PAGE 1 OF 1



DRILLING: STARTED 12/8/05 COMPLETED: 12/8/05
 INSTALLATION: STARTED 12/8/05 COMPLETED: 12/8/05
 DRILLING COMPANY: Cascade
 DRILLING EQUIPMENT: CME 75
 DRILLING METHOD: Hollow Stem Auger
 SAMPLING EQUIPMENT: California Split Spoon

NORTHING (ft): EASTING (ft):
 LATITUDE: LONGITUDE:
 GROUND ELEV (ft): TOC ELEV (ft):
 INITIAL DTW (ft): 12 12/8/05 BOREHOLE DEPTH (ft): 20.5
 STATIC DTW (ft): 8.14 12/20/05 WELL DEPTH (ft): 20.5
 WELL CASING DIAMETER (in): 4 BOREHOLE DIAMETER (in): 10
 LOGGED BY: D. Hovis CHECKED BY: T. Potter


Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID Method	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
		SM	SILTY SAND WITH GRAVEL; SM; 2.5YR 5/3 light olive brown; fine to coarse-grained; non plastic; loose; dry; no odor; well graded; lensed; (20,75,5)							
		CH	FAT CLAY; CH; 2.5YR 5/3 light olive brown; fine-grained; high plasticity; medium stiff; dry; no odor; poorly graded; lensed; (0,5,95)							
5		SM	SILTY SAND; SM; 2.5YR 5/3 light olive brown; fine-grained; non plastic; loose; moist; no odor; rounded; poorly graded; homogeneous; (0,80,20)		EW-1@ 4.5-6' SS			0	5	Portland Cement Schedule 40 PVC Casing
										Bentonite
10			Dry		EW-1@ 9.5-10' SS			0	10	
		CL	LEAN CLAY; CL; 2.5Y 5/3 light olive brown; medium plasticity; very stiff; dry; strong odor; homogeneous; (0,0,100)		EW-1@ 10-11' SS			13.8		RMC #3 Monterey Sand
15					EW-1@ 14.5-15' SS			489	15	
		CL	LEAN CLAY WITH SAND; CL; 5Y 6/3 pale olive; fine-grained; low plasticity; very stiff; wet; strong odor; poorly graded; homogeneous; (0,20,80)		EW-1@ 15-16' SS					0.02" Slotted Screen Sch 40 PVC
20		GW	GRAVEL; GW; 5Y 3/1 very dark gray; fine to coarse-grained; non plastic; medium dense; saturated; slight odor; well graded; homogeneous Hole terminated at 20.5 feet.		EW-1@ 19.5-20' SS EW-1@ 20-21' SS			286 30.5	20	

PROJECT: Circle K Store #5426 LOCATION: 8510 Gravenstein Hwy 101, Cotati, California PROJECT NUMBER: 77CP.65426.08.0012		WELL / PROBEHOLE / BOREHOLE NO: EW-2 PAGE 1 OF 1 SECOR	
DRILLING: STARTED 11/14/05 COMPLETED: 11/14/05 INSTALLATION: STARTED 11/14/05 COMPLETED: 11/14/05 DRILLING COMPANY: Cascade DRILLING EQUIPMENT: CME 75 DRILLING METHOD: Hollow Stem Auger SAMPLING EQUIPMENT: California Split Spoon		NORTHING (ft): LATITUDE: GROUND ELEV (ft): INITIAL DTW (ft): 13.5 11/14/05 STATIC DTW (ft): 10.9 11/18/05 WELL CASING DIAMETER (in): 4 LOGGED BY: D. Hovis	
		EASTING (ft): LONGITUDE: TOC ELEV (ft): BOREHOLE DEPTH (ft): 22.0 WELL DEPTH (ft): 22.0 BOREHOLE DIAMETER (in): 10 CHECKED BY: T. Potter	

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID Method	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
		SM	SILTY SAND; SM; 2.5YR 3/3 dark reddish brown; fine-grained; non plastic; dry; no odor; no staining; rounded; poorly graded; homogeneous							Portland Cement
5		SP	SAND WITH CLAY; SP; 2.5YR 3/3 dark reddish brown; fine-grained; low plasticity; dense; dry; no odor; no staining; rounded; poorly graded; homogeneous; (0,80,20)		EW-2@ 4.5-5' SS EW-2@ 5-6' SS			126 1042	5	Schedule 40 PVC Casing Bentonite
10			10YR 5/2 grayish brown; soft; moist		EW-2@ 9.5-11' SS			197	10	RMC #3 Monterey Sand
15		CL	LEAN CLAY; CL; GLEY1 5/5GY greenish gray; medium plasticity; stiff; moist; homogeneous; (0,0,100)		EW-2@ 14.5-15' SS EW-2@ 15-16' SS			377 507	15	0.020" Slotted Screen Sch 40 PVC
20		SM	SILTY SAND; SM; 2.5YR 3/2 pale red; fine-grained; non plastic; loose; moist; no odor; no staining; rounded; poorly graded; homogeneous; (0,80,20)		EW-2@ 19.5-20' SS EW-2@ 20-21' SS			76 0	20	
		CL	LEAN CLAY; CL; 10YR 5/4 yellowish brown; medium plasticity; stiff; wet; no odor; no staining; homogeneous; (0,0,100) Hole terminated at 22 feet.		EW-2@ 21-22.5' SS			0		

PROJECT: Circle K Store #5426 LOCATION: 8510 Gravenstein Hwy 101, Cotati, California PROJECT NUMBER: 77CP.65426.08.0012		WELL / PROBEHOLE / BOREHOLE NO: EW-3 PAGE 1 OF 1 SECOR	
DRILLING: STARTED 11/15/05 COMPLETED: 11/15/05 INSTALLATION: STARTED 11/15/05 COMPLETED: 11/15/05 DRILLING COMPANY: Cascade DRILLING EQUIPMENT: CME 75 DRILLING METHOD: Hollow Stem Auger SAMPLING EQUIPMENT: California Split Spoon		NORTHING (ft): LATITUDE: GROUND ELEV (ft): INITIAL DTW (ft): 14.5 11/15/05 STATIC DTW (ft): 11.1 11/21/05 WELL CASING DIAMETER (in): 4 LOGGED BY: D. Hovis	
		EASTING (ft): LONGITUDE: TOC ELEV (ft): BOREHOLE DEPTH (ft): 20.0 WELL DEPTH (ft): 20.0 BOREHOLE DIAMETER (in): 10 CHECKED BY: T. Potter	

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID Method	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
5		SM	SILTY SAND; SM; 7.5YR 3/2 dark brown; fine to coarse-grained; non plastic; loose; dry; no odor; no staining; angular; well graded; lensed; (0,85,15)		EW-3@ 4.5-6' SS			15.3	5	
10		CL	LEAN CLAY WITH SAND; CL; 2.5Y 4/2 dark grayish brown; fine to medium-grained; low plasticity; loose; moist; no odor; no staining; rounded; poorly graded; lensed; (0,20,80)		EW-3@ 9.5-11' SS			1772	10	
15			Wet		EW-3@ 14.5-16' SS			3465	15	
20		SM	SILTY SAND; SM; 2.5Y 4/2 dark grayish brown; fine to coarse-grained; non plastic; very loose; saturated; no odor; no staining; subrounded; poorly graded; homogeneous; (0,85,15) Hole terminated at 20 feet.		EW-3@ 19-20.5' SS			35.7	20	

PROJECT: Circle K Store #5426	WELL / PROBEHOLE / BOREHOLE NO: EW-4 PAGE 1 OF 1	
LOCATION: 8510 Gravenstein Hwy 101, Cotati, California		
PROJECT NUMBER: 77CP.65426.08.0012		
DRILLING: STARTED 11/14/05 COMPLETED: 11/14/05	NORTHING (ft):	EASTING (ft):
INSTALLATION: STARTED 11/14/05 COMPLETED: 11/14/05	LATITUDE:	LONGITUDE:
DRILLING COMPANY: Cascade	GROUND ELEV (ft):	TOC ELEV (ft):
DRILLING EQUIPMENT: CME 75	INITIAL DTW (ft): 14 11/14/05	BOREHOLE DEPTH (ft): 22.0
DRILLING METHOD: Hollow Stem Auger	STATIC DTW (ft): 11.4 11/18/05	WELL DEPTH (ft): 22.0
SAMPLING EQUIPMENT: California Split Spoon	WELL CASING DIAMETER (in): 4	BOREHOLE DIAMETER (in): 10
	LOGGED BY: D. Hovis	CHECKED BY: T. Potter

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID Method	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
		SP	SAND; SP; 10YR 5/3 brown; fine-grained; non plastic; loose; wet; no odor; no staining; rounded; poorly graded; lensed; (0.95,5)							
5		CL	LEAN CLAY WITH SAND; CL; 10YR 4/3 brown; fine-grained; medium plasticity; stiff; moist; no odor; no staining; rounded; poorly graded; lensed; (0.20,80)		EW-4@ 4.5-6' SS			0	5	<div> <div>Portland Cement</div> <div>Schedule 40 PVC Casing</div> <div>Bentonite</div> </div>
10		CL	SANDY LEAN CLAY; CL; 2.5Y 5/3 light olive brown; fine-grained; low plasticity; soft; wet; no odor; no staining; rounded; poorly graded; homogeneous; (0.30,70)		EW-4@ 9.5-10' SS			0	10	
		CL	LEAN CLAY; CL; GLEY2 5/10B blueish gray; low plasticity; very stiff; dry; no odor; no staining; lensed; (0.0,100)		EW-4@ 10-11' SS			21		
15		CL	LEAN CLAY WITH SAND; CL; 10YR 5/3 brown; fine-grained; low plasticity; soft; wet; no odor; no staining; rounded; poorly graded; lensed; (0.20,80)		EW-4@ 14.5-15' SS			0	15	
		CL	LEAN CLAY; CL; GLEY1 5/5GY greenish gray; fine-grained; low plasticity; very stiff; dry; no odor; no staining; rounded; poorly graded; lensed; (0.5,95)		EW-4@ 15-16' SS			93		
20		SP	GLEY 1 6/10Y greenish gray; high plasticity; stiff; wet		EW-4@ 19.5-20' SS			10.9	20	
		CL	SAND; SP; 2.5Y 5/3 light olive brown; fine-grained; low plasticity; loose; saturated; no odor; no staining; rounded; poorly graded; lensed; (0.95,5)		EW-4@ 20-21' SS			0		
			LEAN CLAY; CL; 10YR 4/1 dark gray; coarse-grained; medium plasticity; stiff; wet; no odor; no staining; subangular; poorly graded; lensed; (0.5,95)		EW-4@ 21-22.5' SS			0		
			Hole terminated at 22 feet.							

ATTACHMENT 6
**CERTIFIED LABORATORY ANALYTICAL REPORT AND CHAIN-
OF-CUSTODY DOCUMENTATION**

Extraction Well Installation
Circle K Store #5426
8510 Gravenstein Highway 101
Cotati, California

ANALYTICAL REPORT

Job Number: 720-663-1

Job Description: 76 Service Station#5426

For:

Secor International, Inc.
3017 Kilgore Road
Suite 100
Rancho Cordova, CA 95670

Attention: Mr. Thomas M Potter



Melissa Brewer
Project Manager I
mbrewer@stl-inc.com
12/14/2005

METHOD SUMMARY

Client: Secor International, Inc.

Job Number: 720-663-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds by GC/MS	STL-SF	SW846 8260B	
Purge-and-Trap	STL-SF		SW846 5030B

LAB REFERENCES:

STL-SF = STL-San Francisco

METHOD REFERENCES:

SW846 - "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

SAMPLE SUMMARY

Client: Secor International, Inc.

Job Number: 720-663-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-663-1	EW-2	Water	11/21/2005 1245	11/23/2005 1700
720-663-2	EW-3	Water	11/21/2005 1300	11/23/2005 1700
720-663-3	EW-4	Water	11/21/2005 1315	11/23/2005 1700

Analytical Data

Client: Secor International, Inc.

Job Number: 720-663-1

Client Sample ID: EW-2

Lab Sample ID: 720-663-1

Client Matrix: Water

Date Sampled: 11/21/2005 1245

Date Received: 11/23/2005 1700

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 720-2758

Instrument ID: Saturn 2100

Preparation: 5030B

Lab File ID: d:\data\200512\120505\720-

Dilution: 2.0

Initial Weight/Volume: 10 mL

Date Analyzed: 12/05/2005 1633

Final Weight/Volume: 10 mL

Date Prepared: 12/05/2005 1633

Analyte	Result (ug/L)	Qualifier	RL
1,2-Dichloroethane	ND		1.0
Benzene	280		1.0
Ethanol	ND		200
Ethylbenzene	12		1.0
MTBE	180		1.0
TAME	3.8		1.0
Toluene	3.6		1.0
Xylenes, Total	47		2.0
TBA	440		10
DIPE	ND		2.0
EDB	ND		1.0
Gasoline Range Organics (GRO)-C6-C12	3000		100
Ethyl tert-butyl ether	ND		1.0
Surrogate	%Rec		Acceptance Limits
Toluene-d8	103		77 - 121
1,2-Dichloroethane-d4	82		73 - 130

Analytical Data

Client: Secor International, Inc.

Job Number: 720-663-1

Client Sample ID: EW-3

Lab Sample ID: 720-663-2

Client Matrix: Water

Date Sampled: 11/21/2005 1300

Date Received: 11/23/2005 1700

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 720-2673

Instrument ID: Varian 3900A

Preparation: 5030B

Lab File ID: c:\saturnws\data\200512\12

Dilution: 25

Initial Weight/Volume: 10 mL

Date Analyzed: 12/05/2005 1814

Final Weight/Volume: 10 mL

Date Prepared: 12/05/2005 1814

Analyte	Result (ug/L)	Qualifier	RL
1,2-Dichloroethane	ND		13
Benzene	3800		13
Ethanol	ND		2500
Ethylbenzene	1700		13
MTBE	290		13
TAME	ND		13
Toluene	76		13
Xylenes, Total	1800		25
TBA	ND		130
DIPE	ND		25
EDB	ND		13
Gasoline Range Organics (GRO)-C6-C12	15000		1300
Ethyl tert-butyl ether	ND		13
Surrogate	%Rec		Acceptance Limits
Toluene-d8	104		77 - 121
1,2-Dichloroethane-d4	83		73 - 130

Analytical Data

Client: Secor International, Inc.

Job Number: 720-663-1

Client Sample ID: EW-4

Lab Sample ID: 720-663-3

Client Matrix: Water

Date Sampled: 11/21/2005 1315

Date Received: 11/23/2005 1700

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 720-2673

Instrument ID: Varian 3900A

Preparation: 5030B

Lab File ID: c:\saturnws\data\200512\12

Dilution: 1.0

Initial Weight/Volume: 10 mL

Date Analyzed: 12/05/2005 1835

Final Weight/Volume: 10 mL

Date Prepared: 12/05/2005 1835

Analyte	Result (ug/L)	Qualifier	RL
1,2-Dichloroethane	ND		0.50
Benzene	0.84		0.50
Ethanol	ND		100
Ethylbenzene	ND		0.50
MTBE	30		0.50
TAME	0.59		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
TBA	9.3		5.0
DIPE	ND		1.0
EDB	ND		0.50
Gasoline Range Organics (GRO)-C6-C12	190		50
Ethyl tert-butyl ether	ND		0.50
Surrogate	%Rec		Acceptance Limits
Toluene-d8	101		77 - 121
1,2-Dichloroethane-d4	83		73 - 130

DATA REPORTING QUALIFIERS

Lab Section	Qualifier	Description
-------------	-----------	-------------

Quality Control Results

Client: Secor International, Inc.

Job Number: 720-663-1

QC Association Summary

Lab Sample ID	Client Sample ID	Client Matrix	Method	Prep Batch
GC/MS VOA				
Analysis Batch:720-2673				
LCS 720-2673/18	Lab Control Spike	Water	8260B	
LCSD 720-2673/17	Lab Control Spike Duplicate	Water	8260B	
MB 720-2673/19	Method Blank	Water	8260B	
720-663-2	EW-3	Water	8260B	
720-663-3	EW-4	Water	8260B	
Analysis Batch:720-2758				
LCS 720-2758/10	Lab Control Spike	Water	8260B	
LCSD 720-2758/1	Lab Control Spike Duplicate	Water	8260B	
MB 720-2758/2	Method Blank	Water	8260B	
720-663-1	EW-2	Water	8260B	

Quality Control Results

Client: Secor International, Inc.

Job Number: 720-663-1

Surrogate Recovery Report

8260B Volatile Organic Compounds by GC/MS

Client Matrix: Water

<u>Lab Sample ID</u>	<u>Client Sample</u>	<u>(TOL) (%Rec)</u>	<u>1,2-Dichl oroetha</u>
720-663-1	EW-2	103	82
720-663-2	EW-3	104	83
720-663-3	EW-4	101	83
LCS 720-2673/18	LCS	103	85
LCS 720-2758/10	LCS	96	83
LCSD 720-2673/17	LCSD	102	82
LCSD 720-2758/1	LCSD	98	83
MB 720-2673/19	MB	100	86
MB 720-2758/2	MB	97	89

<u>Surrogate</u>		<u>Acceptance Limits</u>
(TOL)	Toluene-d8	77 - 121
1,2-Dichloroet	1,2-Dichloroethane-d4	73 - 130

Quality Control Results

Client: Secor International, Inc.

Job Number: 720-663-1

Method Blank - Batch: 720-2673

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 720-2673/19
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/05/2005 1019
Date Prepared: 12/05/2005 1019

Analysis Batch: 720-2673
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900A
Lab File ID: c:\saturnws\data\200512\12
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
1,2-Dichloroethane	ND		0.50
Benzene	ND		0.50
Ethanol	ND		100
Ethylbenzene	ND		0.50
MTBE	ND		0.50
TAME	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
TBA	ND		5.0
DIPE	ND		1.0
EDB	ND		0.50
Gasoline Range Organics (GRO)-C6-C12	ND		50
Ethyl tert-butyl ether	ND		0.50
Surrogate	% Rec	Acceptance Limits	
Toluene-d8	100	77 - 121	
1,2-Dichloroethane-d4	86	73 - 130	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Secor International, Inc.

Job Number: 720-663-1

Laboratory Control/ Laboratory Control Duplicate Recovery Report - Batch: 720-2673

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID: LCS 720-2673/18
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/05/2005 0957
Date Prepared: 12/05/2005 0957

Analysis Batch: 720-2673
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900A
Lab File ID: c:\saturnws\data\200512\120
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-2673/17
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/05/2005 1040
Date Prepared: 12/05/2005 1040

Analysis Batch: 720-2673
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900A
Lab File ID: c:\saturnws\data\200512\120
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Benzene	91	88	69 - 129	3	25		
MTBE	106	95	65 - 165	10	25		
Toluene	95	90	70 - 130	5	25		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
Toluene-d8	103		102		77 - 121		
1,2-Dichloroethane-d4	85		82		73 - 130		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Secor International, Inc.

Job Number: 720-663-1

Method Blank - Batch: 720-2758

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 720-2758/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/05/2005 1136
Date Prepared: 12/05/2005 1136

Analysis Batch: 720-2758
Prep Batch: N/A
Units: ug/L

Instrument ID: Saturn 2100
Lab File ID: d:\data\200512\120505\mb-
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
1,2-Dichloroethane	ND		0.50
Benzene	ND		0.50
Ethanol	ND		100
Ethylbenzene	ND		0.50
MTBE	ND		0.50
TAME	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
TBA	ND		5.0
DIPE	ND		1.0
EDB	ND		0.50
Gasoline Range Organics (GRO)-C6-C12	ND		50
Ethyl tert-butyl ether	ND		0.50
Surrogate	% Rec	Acceptance Limits	
Toluene-d8	97	77 - 121	
1,2-Dichloroethane-d4	89	73 - 130	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Secor International, Inc.

Job Number: 720-663-1

**Laboratory Control/
Laboratory Control Duplicate Recovery Report - Batch: 720-2758**

**Method: 8260B
Preparation: 5030B**

LCS Lab Sample ID: LCS 720-2758/10
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/05/2005 1043
Date Prepared: 12/05/2005 1043

Analysis Batch: 720-2758
Prep Batch: N/A
Units: ug/L

Instrument ID: Saturn 2100
Lab File ID: d:\data\200512\120505\ls-v
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-2758/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/05/2005 1110
Date Prepared: 12/05/2005 1110

Analysis Batch: 720-2758
Prep Batch: N/A
Units: ug/L

Instrument ID: Saturn 2100
Lab File ID: d:\data\200512\120505\ld-w
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Benzene	81	83	69 - 129	3	25		
MTBE	88	93	65 - 165	6	25		
Toluene	85	87	70 - 130	3	25		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
Toluene-d8	96		98		77 - 121		
1,2-Dichloroethane-d4	83		83		73 - 130		

Calculations are performed before rounding to avoid round-off errors in calculated results.

ConocoPhillips Chain Of Custody Record

114781

STL-San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

(925) 484-1919 (925) 484-1096 fax

ConocoPhillips Site Manager:

INVOICE REMITTANCE ADDRESS:

CONOCOPHILLIPS
Attn: Dee Hutchinson
3611 South Harbor, Suite 200
Santa Ana, CA, 92704

WNO2378

ConocoPhillips Coa (Object)

DATE: 11/18/2005

PAGE: 1 of 1

720-663

SAMPLING COMPANY:		CONOCOPHILLIPS SITE NUMBER	
SECOR International, Inc.		76 Service Station #5426	
ADDRESS:		SITE ADDRESS (Street and City):	
3017 Kilgore Rd., Suite 100		8510 Gravenstein Hwy 101, Cotati, Ca	
PROJECT CONTACT (Name/Phone/Fax):		PHONE NO.:	
Thomas M. Poller		916-801-0400	
TELEPHONE:		E-MAIL:	
916-861-0400 ext. 288		tpoll@conoco.com	
FAX:		LAB USE ONLY	
916-861-0430		tpoll@conoco.com	
SAMPLER NAME(S) (Print):		LABORATORY NAME:	
Devon Hayes		77CF.05426.08.0009	

REQUESTED ANALYSES			
Field Point Name	DATE	TIME	NO. OF CONT.
EW-2	11-21-05	1245	5
EW-3	11-21-05	1300	5
EW-4	11-21-05	1315	5
B015M - TPHd Extractable B260B - TPHg/BTEX/MIBE B260B - TPHg/BTEX/B Oxygenates B260B - TPHg/BTEX/B B260B - Full Scan VOCs (does not include oxygenates) B270C - Semi-Volatiles B015M / B021B - TPHg/BTEX/MIBE Lead <input type="checkbox"/> Total <input type="checkbox"/> STLC <input type="checkbox"/> TCLP R-149 TPH (Middle Distillates) TPH (Residue Fuels)			
FIELD NOTES: Containment Preservative or PID Readings or Laboratory Notes			
TEMPERATURE ON RECEIPT C			
11/21/05 1525			
11/23/05 1400			
11/23/05 1700			

LOGIN SAMPLE RECEIPT CHECK LIST

Client: Secor International, Inc.

Job Number: 720-663-1

Login Number: 663

Question	T/F/NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	NA	
The cooler's custody seal, if present.	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	False	1 of 5 vials from each EW-2, EW-3 & EW-4 has a bubble >1/4"
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present	True	
Samples do not require splitting or compositing	True	

ANALYTICAL REPORT

Job Number: 720-1249-1

Job Description: Conoco Phillips #5426, Cotati

For:

Secor International, Inc.
3017 Kilgore Road
Suite 100
Rancho Cordova, CA 95670

Attention: Mr. Thomas M Potter



Dimple Sharma
Project Manager I
dsharma@stl-inc.com
01/06/2006

METHOD SUMMARY

Client: Secor International, Inc.

Job Number: 720-1249-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds by GC/MS	STL-SF	SW846 8260B	
Purge-and-Trap	STL-SF		SW846 5030B

LAB REFERENCES:

STL-SF = STL-San Francisco

METHOD REFERENCES:

SW846 - "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986
And Its Updates.

SAMPLE SUMMARY

Client: Secor International, Inc.

Job Number: 720-1249-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-1249-1	EW-1	Water	12/20/2005 1502	12/30/2005 1335

Analytical Data

Client: Secor International, Inc.

Job Number: 720-1249-1

Client Sample ID: EW-1

Lab Sample ID: 720-1249-1

Client Matrix: Water

Date Sampled: 12/20/2005 1502

Date Received: 12/30/2005 1335

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 720-3993

Instrument ID: Varian 3900E

Preparation: 5030B

Lab File ID: c:\varianws\data\200601\01

Dilution: 1.0

Initial Weight/Volume: 10 mL

Date Analyzed: 01/03/2006 2046

Final Weight/Volume: 10 mL

Date Prepared: 01/03/2006 2046

Analyte	Result (ug/L)	Qualifier	RL
1,2-Dichloroethane	ND		0.50
Benzene	21		0.50
Ethylbenzene	170		0.50
MTBE	160		0.50
TAME	2.3		0.50
Toluene	1.4		0.50
Xylenes, Total	410		1.0
TBA	55		5.0
DIPE	ND		1.0
EDB	ND		0.50
Gasoline Range Organics (GRO)-C6-C12	4600		50
Ethyl tert-butyl ether	ND		0.50
Surrogate	%Rec		Acceptance Limits
Toluene-d8	105		77 - 121
1,2-Dichloroethane-d4	123		73 - 130

DATA REPORTING QUALIFIERS

Lab Section	Qualifier	Description
-------------	-----------	-------------

Quality Control Results

Client: Secor International, Inc.

Job Number: 720-1249-1

QC Association Summary

Lab Sample ID	Client Sample ID	Client Matrix	Method	Prep Batch
GC/MS VOA				
Analysis Batch:720-3993				
LCS 720-3993/11	Lab Control Spike	Water	8260B	
LCSD 720-3993/10	Lab Control Spike Duplicate	Water	8260B	
MB 720-3993/12	Method Blank	Water	8260B	
720-1249-1	EW-1	Water	8260B	

Quality Control Results

Client: Secor International, Inc.

Job Number: 720-1249-1

Method Blank - Batch: 720-3993

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 720-3993/12
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/03/2006 1643
Date Prepared: 01/03/2006 1643

Analysis Batch: 720-3993
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900E
Lab File ID: c:\varianws\data\200601\01
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
1,2-Dichloroethane	ND		0.50
Benzene	ND		0.50
Ethylbenzene	ND		0.50
MTBE	ND		0.50
TAME	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
TBA	ND		5.0
DIPE	ND		1.0
EDB	ND		0.50
Gasoline Range Organics (GRO)-C6-C12	ND		50
Ethyl tert-butyl ether	ND		0.50
Surrogate	% Rec	Acceptance Limits	
Toluene-d8	105	77 - 121	
1,2-Dichloroethane-d4	117	73 - 130	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Secor International, Inc.

Job Number: 720-1249-1

Laboratory Control/ Laboratory Control Duplicate Recovery Report - Batch: 720-3993

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID: LCS 720-3993/11
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/03/2006 1604
Date Prepared: 01/03/2006 1604

Analysis Batch: 720-3993
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900E
Lab File ID: c:\varianws\data\200601\010
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-3993/10
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/03/2006 1624
Date Prepared: 01/03/2006 1624

Analysis Batch: 720-3993
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900E
Lab File ID: c:\varianws\data\200601\010
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Benzene	111	112	69 - 129	1	25		
MTBE	101	106	65 - 165	4	25		
Toluene	112	113	70 - 130	1	25		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
Toluene-d8	101		103		77 - 121		
1,2-Dichloroethane-d4	96		102		73 - 130		

Calculations are performed before rounding to avoid round-off errors in calculated results.

720-1249

STL-San Francisco
1220 Quarry Lane
Pleasanton, CA 94566
(925) 484-1919 (925) 484-1096 fax

ConocoPhillips Chain Of Custody Record

114734

STL-San Francisco 1220 Quarry Lane Pleasanton, CA 94566 (925) 484-1919 (925) 484-1096 fax		ConocoPhillips Site Manager INVOICE REMITTANCE ADDRESS: CONOCOPHILLIPS Attn: Dee Hutchinson 3611 South Harbor, Suite 200 Santa Ana, CA. 92704		ConocoPhillips Work Order Number WNO2378 ConocoPhillips Cost Object 2378SEC014		DATE: <u>12/29/05</u> PAGE: 1 of 1	
SECOR COMPANY: SECOR International, Inc. ADDRESS: 3017 Kilgore Rd., Suite 100 PROJECT CONTACT (hardcopy or PDF Report to): Thomas M. Potter TEL/PHONE: 916-861-0400 ex. 288 FAX: 916-861-0430 E-MAIL: tpotter@secor.com CONSULTANT PROJECT NUMBER: 77CP 65426.08 0009		CONOCOPHILLIPS SITE NUMBER: Circle K Store #5426 SITE ADDRESS (Street and City): 8510 Gravenstein Hwy 101, Cotati, Ca EDD DELIVERABLE TO (RP or Designer): Thomas M. Potter PHONE NO.: 916-861-0400 E-MAIL: tpotter@secor.com		LAB USE ONLY LAB: <u>USE ONLY</u> LAB: <u>USE ONLY</u>		GLOBAL ID NO.: T0609700386	
TURNAROUND TIME (CALENDAR DAYS): <input checked="" type="checkbox"/> 14 DAYS <input type="checkbox"/> 7 DAYS <input type="checkbox"/> 48 HOURS <input type="checkbox"/> LESS THAN 24 HOURS		SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NEEDED <input type="checkbox"/>		REQUESTED ANALYSES			
FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes		TEMPERATURE ON RECEIPT <u>52</u>					
8015M - TPHd Extractable 8260B - TPHg/BTEX/MIBE 8260B - TPHg/BTEX/B Oxygenates 8260B - TPHg/BTEX/B Oxygenates + methanol (8015M) 8260B - Full Scan VOCs (does not include oxygenates) 8270C - Semi-Volatiles 8015M / 8021B - TPHg/BTEX/MIBE Lead □ Total □ STLC □ TCCLP R-149		TPH (Middle Distillates) TPH (Residue Fuels)					
Sample Identification/Field Point Name* EW-1		SAMPLING DATE 12/29/05		TIME 1502		MATRIX water	
NO. OF CONT. 5							
RECEIVED BY (Signature) <u>[Signature]</u>		RECEIVED BY (Signature) <u>[Signature]</u>		RECEIVED BY (Signature) <u>[Signature]</u>		RECEIVED BY (Signature) <u>[Signature]</u>	
DATE 12/29/05		DATE 12/29/05		DATE 12/29/05		DATE 12/29/05	
TIME 1625		TIME 1020		TIME 1200		TIME 1200	

LOGIN SAMPLE RECEIPT CHECK LIST

Client: Secor International, Inc.

Job Number: 720-1249-1

Login Number: 1249

Question	T/F/NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	NA	
The cooler's custody seal, if present, is intact.	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

ATTACHMENT 7
WELL DEVELOPMENT LOGS

Extraction Well Installation
Circle K Store #5426
8510 Gravenstein Highway 101
Cotati, California

WELL DEVELOPMENT LOG

Project Number 77CP, 65426.05 Well EW-1
 Project Name C.P. #5426 Development Subcontractor Cascade Drilling
 Performed/Supervised CORD DENNIG 12/20/05
 Development Method Airlift Sub. Pump Surge Block Bailer Other
 Development Criteria Purge 10 casing volumes or until clear; sample 5 VOT's
 Equipment Cleaning Method Rinse and soak with detergent.
 Field Instruments Used D.O. meter, depth gauge, E.C./pH/temp. meter, trash pump
 Development Water Disposal Method Onsite drums.
 Comments _____

DEVELOPMENT DATA

Depth to Water: Start 8.14 End 8.36 Ref. Point Elev. _____ Height Above Ground Surface _____
 Total Depth: Start 20.11 End 20.32 Initial D.O.: 0.5 mg/L

Date	Time	Cumulative Discharge (gallons)	Turbidity	Conductivity	Color	pH	Temperature	Other
12/20/05	1359	8	High	929	Brown	7.01	18.3	
	1407	16	High	916	Brown	7.12	18.3	
	1414	24	High	954	Brown	7.00	18.4	
	1420	32	High	1016	Brown	7.11	18.6	
	1426	40	High	961	Brown	7.06	18.7	
	1432	48	Med.	899	Lt. Brn.	6.94	18.9	
	1438	56	Med.	871	Lt. Brn.	6.81	19.0	
	1444	64	Low	866	SemiClear	6.87	19.1	
	1449	72	Low	829	SemiClear	6.96	18.9	
V	1455	80	Low	815	SemiClear	6.88	18.9	

REMARKS:

2 drums generated

WELL DEVELOPMENT LOG

Project Number CP # 5426 Well ~~NA~~ EW-2
 Project Name SVE well development Development Subcontractor Cascade
 Performed/Supervised SECOR
 Development Method Airlift Sub. Pump Surge Block Bailer Other _____
 Development Criteria 10 case volumes or until stabilization
pH, conductivity and temperature within 10% of prior 2 readings
 Equipment Cleaning Method steam
 Field Instruments Used oakton
 Development Water Disposal Method 55 gallon D.O.T drums
 Comments 21.7' - 10.9' = 10.8' x 0.67 = 7.236 x 10 = 72.36 gallons
TD DTW H₂O column 4" casing logging volume

DEVELOPMENT DATA

Depth to Water: Start 10.9 End _____ Ref. Point Elev. TOC Height Above Ground Surface _____
 Total Depth: Start 21.7 End _____

Date	Time	Cumulative Discharge (gallons)	Turbidity	Conductivity	Color	pH	Temperature	Other
11-18-05	0948	7.5	high	1692 μ S	dark olive brown	7.67	20.3	odor
	0952	(15) 14.5	high	1605 μ S		7.56	20.8	↓
	0957	(22) 21.7	high	1393 μ S		7.42	20.6	--
	1003	(30) 28.9	high	1385 μ S		7.45	20.6	odor
	1030	(37.3) 36.2	high	1315 μ S	↓	7.32	20.7	--
	1035	(44) 43.4	high	1319 μ S	olive brown	7.28	20.1	--
	1100	(51) 50.7	high	1202 μ S	dark olive brown	7.28	20.5	--
	1110	(60) 57.9	high	1187 μ S		7.23	20.5	--
	1113	(67) 65.1	high	1187 μ S	↓	7.21	20.6	--
✓	1135	(73) 72.4	moderate to high	1148 μ S	olive brown	7.22	20.5	odor
	1149	(86.3) 85.2		1147 μ S		7.21	20.6	--
✓	1155	(93.5) 92.4	↓	1125 μ S	↓	7.22	20.6	--

REMARKS: bailer = 2.5 gallons

22.5 gallons 24.5 26 28 30 32.5 35 37.5 40 42.5 45 47.5 50 52.5 55 57.5 60 62.5 65 67.5 70 72.5 75 77.5 80 82.5 85 87.5 90 92.5 95 97.5 100
 1. 69.5 = 70 (11.5) 79.5 84 89 88 91 93.5 87 93.5 86.5 82.5 87.5 86.5

WELL DEVELOPMENT LOG

Project Number CP * 5426 Well FW-3
 Project Name SVE development Development Subcontractor Cascade
 Performed/Supervised SECOR
 Development Method Airlift Sub. Pump Surge Block Bailer Other _____
 Development Criteria 10 case volumes or until stabilization
 Equipment Cleaning Method steam
 Field Instruments Used Oakton
 Development Water Disposal Method 55 gallon D.O.T. drums
 Comments 20' - 11.1' = 8.9' x 0.67 = 5.963' x 10 = 59.63
TP DTW H₂O column 4" casing casing volume

DEVELOPMENT DATA

Depth to Water: Start 11.1 End 17.2 Ref. Point Elev. TOC Height Above Ground Surface _____
 Total Depth: Start 19.4 End 19.4

Date	Time	Cumulative Discharge (gallons)	Turbidity	Conductivity	Color	pH	Temperature	Other
11-21-05	1109	6 (8)	high	2.14 mS	dark olive brown	7.32	20.5	
	1113	12	high	2.13 mS	↓	7.30	20.5	
	1125	18	high	1642 μS	↓	7.01	20.2	
	1201	24	moderate to high	1458 μS	olive brown	6.82	20.1	
	1209	30	moderate to high	1470 μS	↓	6.90	20.3	
	1234	36	moderate	1374 μS	↓	6.86	20.5	
	1237	42	moderate	1371 μS	↓	6.86	20.5	
	1241	48	moderate	1357 μS	↓	6.91	20.5	
		54						
		60						

REMARKS:

10 #1 3834

WELL DEVELOPMENT LOG

Project Number CP # 5426 Well EW-4
 Project Name SVE well development Development Subcontractor Cascade
 Performed/Supervised SECOB
 Development Method Airlift Sub. Pump Surge Block Bailer Other _____
 Development Criteria 10 well casings or until stabilization
 Equipment Cleaning Method steam
 Field Instruments Used oakton
 Development Water Disposal Method 55 gallon D.O.T. drums
 Comments 21.8' - 11.4' = 10.4' x 0.67 = 6.968 x 10 = 69.68 gallons
TD PTW #1 column 4" casing casing volume TD 22' = 7.102 casing volume

DEVELOPMENT DATA

Depth to Water: Start 11.4' End _____ Ref. Point Elev. TOC Height Above Ground Surface _____
 Total Depth: Start 21.8' End _____

Date	Time	Cumulative Discharge (gallons)	Turbidity	Conductivity	Color	pH	Temperature	Other
11-18-05	1315	(7.5) 7	very high	1610 μ S	dark gray brown	7.48	21.3	
	1321	14	↓	1466 μ S	↓	7.58	20.9	
	1354	(21.5) 21	↓	1089 μ S	↓	7.31	21.0	
	1418	(30) 28	high	989 μ S	dark olive brown	7.27	21.0	
	1423	(37) 29	↓	1068 μ S	↓	7.31	21.0	H ₂ O @ 16.5'
		42						
		49						
		56						
		63						
✓		70						

REMARKS: 11' 14' 25' 37'
 15 min 2-4 b

ATTACHMENT 8
CONFIRMATION OF EDF SUBMITTAL

Extraction Well Installation
Circle K Store #5426
8510 Gravenstein Highway 101
Cotati, California

Electronic Submittal Information

[Main Menu](#) | [View/Add Facilities](#) | [Upload EDD](#) | [Check EDD](#)

Your EDF file has been successfully uploaded!

Confirmation Number: 4577142000

Date/Time of Submittal: 2/3/2006 3:32:49 PM

Facility Global ID: T0609700386

Facility Name: BP Service Station

Submittal Title: Extraction Well Installation Report (1 of 2)

Submittal Type: Soil & Water Investigation Report

Click [here](#) to view the detections report for this upload.

BP SERVICE STATION 8510 GRAVENSTEIN HWY COTATI, CA 94931	Regional Board - Case #: 1TSQ551 NORTH COAST RWQCB (REGION 1) - (HAZ) Local Agency (lead agency) - Case #: 00001670 SONOMA COUNTY LOP - (DR)
---	---

CONF #	TITLE	QUARTER
4577142000	Extraction Well Installation Report (1 of 2)	Q4 2005
SUBMITTED BY	SUBMIT DATE	STATUS
Rusty Benkosky	2/3/2006	PENDING REVIEW

SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED	3
# FIELD POINTS WITH DETECTIONS	3
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	3
SAMPLE MATRIX TYPES	WATER

METHOD QA/QC REPORT

METHODS USED	SW8260B
TESTED FOR REQUIRED ANALYTES?	N
MISSING PARAMETERS NOT TESTED:	
- SW8260B REQUIRES EDB TO BE TESTED	
LAB NOTE DATA QUALIFIERS	N

QA/QC FOR 8021/8260 SERIES SAMPLES

TECHNICAL HOLDING TIME VIOLATIONS	0
METHOD HOLDING TIME VIOLATIONS	0
LAB BLANK DETECTIONS ABOVE REPORTING DETECTION LIMIT	0
LAB BLANK DETECTIONS	0
DO ALL BATCHES WITH THE 8021/8260 SERIES INCLUDE THE FOLLOWING?	
- LAB METHOD BLANK	Y
- MATRIX SPIKE	N
- MATRIX SPIKE DUPLICATE	N
- BLANK SPIKE	Y
- SURROGATE SPIKE	Y

WATER SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	n/a
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	n/a
SURROGATE SPIKES % RECOVERY BETWEEN 85-115%	Y
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	Y

SOIL SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	n/a
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MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	n/a
SURROGATE SPIKES % RECOVERY BETWEEN 70-125%	n/a
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	n/a

FIELD QC SAMPLES

<u>SAMPLE</u>	<u>COLLECTED</u>	<u>DETECTIONS > REPD.</u>
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

Logged in as SECOR-Sac-rbenkosky (CONTRACTOR)

CONTACT SITE ADMINISTRATOR

Electronic Submittal Information

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Confirmation Number: 7410655498

Date/Time of Submittal: 2/3/2006 3:40:04 PM

Facility Global ID: T0609700386

Facility Name: BP Service Station

Submittal Title: Extraction Well Installation Report (2 of 2)

Submittal Type: Soil & Water Investigation Report

Click [here](#) to view the detections report for this upload.

BP SERVICE STATION 8510 GRAVENSTEIN HWY COTATI, CA 94931	Regional Board - Case #: 1TSO551 NORTH COAST RWQCB (REGION 1) - (HAZ) Local Agency (lead agency) - Case #: 00001670 SONOMA COUNTY LOP - (DR)
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CONF #	TITLE	QUARTER
7410655498	Extraction Well Installation Report (2 of 2)	Q4 2005
SUBMITTED BY	SUBMIT DATE	STATUS
Rusty Benkosky	2/3/2006	PENDING REVIEW

SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED	1
# FIELD POINTS WITH DETECTIONS	1
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	1
SAMPLE MATRIX TYPES	WATER

METHOD QA/QC REPORT

METHODS USED	SW8260B
TESTED FOR REQUIRED ANALYTES?	N
MISSING PARAMETERS NOT TESTED:	
- SW8260B REQUIRES EDB TO BE TESTED	
LAB NOTE DATA QUALIFIERS	N

QA/QC FOR 8021/8260 SERIES SAMPLES

TECHNICAL HOLDING TIME VIOLATIONS	0
METHOD HOLDING TIME VIOLATIONS	0
LAB BLANK DETECTIONS ABOVE REPORTING DETECTION LIMIT	0
LAB BLANK DETECTIONS	0
DO ALL BATCHES WITH THE 8021/8260 SERIES INCLUDE THE FOLLOWING?	
- LAB METHOD BLANK	Y
- MATRIX SPIKE	N
- MATRIX SPIKE DUPLICATE	N
- BLANK SPIKE	Y
- SURROGATE SPIKE	Y

WATER SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	n/a
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	n/a
SURROGATE SPIKES % RECOVERY BETWEEN 85-115%	N
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	Y

SOIL SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	n/a
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MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	n/a
SURROGATE SPIKES % RECOVERY BETWEEN 70-125%	n/a
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	n/a

FIELD QC SAMPLES

<u>SAMPLE</u>	<u>COLLECTED</u>	<u>DETECTIONS > REPD</u>
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

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